

Remarks

The Applicants have amended independent Claims 1 and 17 to recite a specified amount of Mo, namely about 0.05 to about 0.5% of Mo. The upper range of the amount of Mo is taken from another location in Claims 1 and 17. On the other hand, the lower amount in the range may be found in the Applicants' Specification in paragraph [0035] on page 9. Entry into the official file is respectfully requested.

Claims 1, 5, 17, 21 and 27 stand rejected under 35 USC §103 as being obvious over Ishizaki. The Applicants respectfully submit that Ishizaki fails to render Claims 1, 5, 7, 21 and 27 obvious under §103 for the reasons set forth below.

Independent Claims 1 and 17 specifically recite a range of about 0.05 to about 0.5% of Mo. The Applicants respectfully submit that Ishizaki fails to disclose any amount of Mo. In fact, Mo is not mentioned in Ishizaki at any location. This is confirmed in the rejection on page 3, wherein the rejection admits that there is no disclosure of Ishizaki and that there is no overlap.

The Applicants therefore respectfully submit that Ishizaki is not enabling as prior art with respect to Claims 1, 5, 17, 21 and 27. The complete omission of disclosure of Mo and, Mo in any amount, renders Ishizaki as failing to enable one skilled in the art to obtain guidance or teachings from that disclosure as to the incorporation of Mo into the steels of Ishizaki. Accordingly, Ishizaki is inapplicable and incapable of rendering Claims 1, 5, 7, 17, 21 and 27 obvious under §103.

Also, the Applicants invite the Examiner's attention to Ishizaki wherein the yield strength is 55.0 kg/mm² (539MPa) at the highest yield strength. This can be found in Figure 2 and Tables 4, 6 and 8 of Ishizaki. This is sharply contrasted to the Applicants' claimed 560MPa or more. It is thus clear that the various combinations taught by Ishizaki result in yield strengths that are

substantially lower than those achieved by the Applicants. Moreover, there is nothing in Ishizaki that provides guidance as to how one skilled in the art might achieve the Applicants' higher yield strengths. As a consequence, the Applicants respectfully submit that all of Claims 1, 5, 17, 21 and 27 are allowable over Ishizaki.

There is still a further difference with respect to independent Claim 17. In that regard, the Applicants invite the Examiner's attention to column 5, lines 12-15 of Ishizaki that teaches:

“the content of upper bainite in the steel after rolling can also be reduced remarkably.”

This is sharply contrasted to the Applicants' Claim 17 and the teachings set forth in paragraph [0046] of the Applicants' Specification which state:

“Bainitic ferrite of the present application has a ferrite microstructure transformed at a low temperature in which a great number of dislocations are present in the grains and is apparently different from polygonal ferrite (soft pro-eutectoid ferrite transformed at a high temperature) which is common ferrite.

In other words, the Applicants' bainitic ferrite has higher yield strength than common ferrite of Ishizaki because of a great number of dislocations and the steel structure of Ishizaki is not bainitic ferrite. This is still a further difference.

The Applicants' Specification at paragraph [0044] further states:

The reason the steel microstructure is composed of bainitic ferrite as a primary phase is to ensure strength and toughness. A fine grain must be formed to ensure strength. It is preferable from this point of view that bainitic ferrite have a crystal grain diameter of approximately 10 µm or less.

The Applicants respectfully submit that these teachings are also not present in Ishizaki and Ishizaki fails to provide guidance as to how or why this could or would be of benefit. Thus, Claim 17 is further allowable over Ishizaki.

Claims 3, 7, 19 and 23 stand rejected under 35 USC §103 over the hypothetical combination of ASM Metals Handbook with Ishizaki. The Applicants respectfully submit that this hypothetical combination would still fail to provide teachings to one skilled in the art that would lead one to the subject matter of those rejected claims.

As noted above, there is no disclosure of yield strengths in Ishizaki that are even close to the Applicants' claimed yield strength of 560MPa. Moreover, there is nothing in Ishizaki that would provide guidance or even motivation to one skilled in the art to achieve the Applicants' yield strength.

Hypothetically combining ASM with Ishizaki does nothing to cure that deficiency. Instead, ASM focuses on impact energy/strength and does not concern itself with yield strength. As a consequence, one skilled in the art would have no incentive to look to ASM to provide guidance or teachings with respect to increasing yield strength. Withdrawal of that rejection is also respectfully requested.

Claims 25 and 26 stand rejected under 35 USC §103 over the hypothetical combination of Unrath with Ishizaki. The Applicants respectfully submit that hypothetically combining Unrath with Ishizaki fails to cure the deficiencies set forth above with respect to Ishizaki and ASM. Therefore, the Applicants respectfully submit that one skilled in the art would not make the hypothetical combination and, in any event, the hypothetical combination would still fail to result in what the Applicants claim in Claims 25 and 26. Withdrawal of that rejection is also respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



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